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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Takuma IIDA et al.

Serial No.: 10/506,295

Filed: April 28, 2005

Title: BATTERY PACKAGE AND MOTHOD
CHARGING AND DISCHARGING THE
SAME

Group Art Unit: 2838

Examiner:

Attorney Docket No.: MATS: 049

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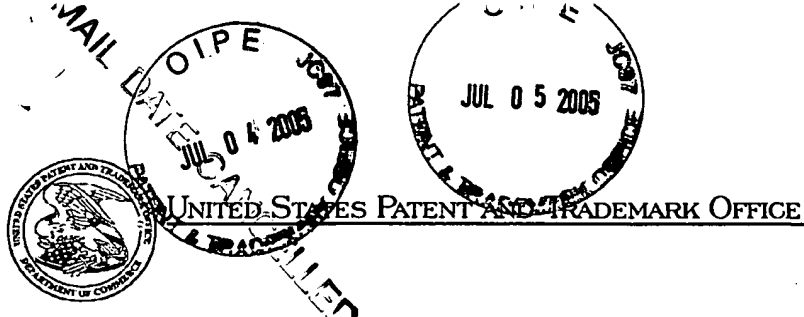
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Respectfully submitted,

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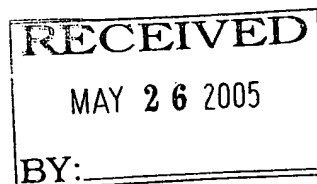
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FILING RECEIPT



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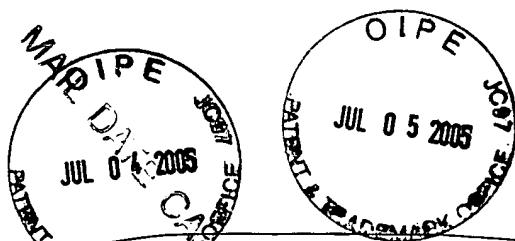
Foreign Applications

JAPAN 2002-354091 12/05/2002
 JAPAN 2002-354092 12/05/2002

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Non-Publication Request: No

Early Publication Request: No



Title

Battery pack and its charging/discharging method

Preliminary Class

320

Battery package and method charging and discharging the same.

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DESCRIPTION

Battery Package and Method Charging and Discharging the Same

5 TECHNICAL FIELD

The present invention relates to a battery package comprising a secondary battery such as an alkaline storage battery, and a battery controlling method such as a charging and discharging method for effective use of the battery package. In particular, the invention relates to a method of controlling a
10 battery during charging and discharging the battery package comprising the secondary battery consisting of the alkaline storage battery such as a nickel hydrogen battery used in the battery package, as well as a method of making effective use of a capacity of the secondary battery contained in the battery package.

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BACKGROUND ART

The remarkable progress in the technology of electronics in recent years has made possible downsizing and weight reduction of many electronic apparatuses, and it has resulted in a rapid advancement of cordless and portable operation of
20 the apparatuses. With the advancement of these apparatuses, there is an increased demand for small and lightweight batteries (i.e., storage batteries, or secondary batteries) of high energy density, useful as power supplies for the electronic apparatuses. These batteries have been used as power supplies of numerous products including power sources of electric tools, backup power
25 supplies, and the like. Nickel cadmium battery is one kind of these batteries (i.e., secondary batteries) that have been hitherto used widely as the power supplies. However, because of the increase in demand of high capacity, and